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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/584,033	05/01/2007	Jerry L. Holden	60158-286 PUS1	6905
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EXAMINER				
YUSUF, MOHAMMAD I				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/584,033

Applicant(s)

HOLDEN, JERRY L.

Examiner

MOHAMMAD YUSUF

Art Unit

3725

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 March 2010.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 2, 5-14, 20 and 21 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-2, 5-14, 20-21 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/GS/US)
Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-2, 5-14 and 20-21 have been considered but are moot in view of the new ground(s) of rejection.
2. Currently claims 1-2, 5-14 and 20-21 are pending, and claims 3-4 and 15-19 are cancelled.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claims 10, 11, 14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
5. Regarding claim 10, it is unclear whether the applicant is claiming a product or a method. Regarding claims 11 and 14, it is unclear whether the applicant is claiming an apparatus or a method.

While claim 1 is a method claim, claim 10 contains product limitation such as the tube end feature and claims 11 and 14 contains apparatus limitation such the rollers.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-2, 6-8, 10 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Valleins (US 3,494,170).

In regard to **claims 1, 6-8 and 20**, Valleins discloses a method of forming a tube comprising the steps of:

positioning the tube in a first position [figures 1-2];

forming an indentation on the tube with a mold [figures 3-4];

moving the tube to a second position relative to the mold [column 3 lines 27-32]; and

releasing the mold from the tube [figures 5-6], where in the step of moving occurs after the step of releasing [column 3 lines 27-3].

In regard to **claim 2**, Valleins discloses repeating the step of forming [column 3 lines 27-3]. In regard to **claim 10**, Valleins discloses circular cross-sectioned end portion [fig. 7, top end].

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 11 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Valleins (US 3,494,170) as applied to claim 1 above, in view of Zifferer (US 2002/0121361).

In regard to **claims 11 and 14**, Valleins does not disclose plurality of rollers, but rather discloses dies 8 for forming. However Zifferer discloses a mold with plurality of rollers. It would have been obvious to provide Valleins with plurality of roller instead of dies because they are functional equivalent.

10. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Valleins (US 3,494,170) in view of Steingroever (US 5,964,127).

In regard to **claim 21**, Valleins discloses a method of forming a tube comprising the steps of: positioning the tube in a first position [figures 1-2]; forming an indentation on the tube with a mold [figures 3-4]; moving the tube to a second position relative to the mold [column 3 lines 27-32]; and releasing the mold from the tube [figures 5-6], where in the step of moving occurs after the step of releasing [column 3 lines 27-3].

Valleins only discloses axially transferring the tube, but does not disclose rotating the tube as well.

However, Steingroever also discloses forming a tubular body for heat exchanger where the tube is intermittently moved both axially and rotatably approximately 5-9 degrees [axial movement 9 and rotating movement 11, fig. 1].

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide Valleins with a rotating move to the tube in addition to

axial move between forming as disclosed by Steingroever in order to provide structural integrity to Valleins metal frame by having ribs or flutings radially around the metal tube instead of just two sides and thus the tubular frame being able to withstand transverse compression from any circumferential face.

11. Claim 5, 9 and 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references as applied to claims 1 and 11 above, and further in view of Steingroever (US 5,964,127).

In regard to **claims 5, 9 and 12-13**, Valleins discloses a method of forming a tube comprising the steps of: positioning the tube in a first position [figures 1-2]; forming an indentation on the tube with a mold [figures 3-4]; moving the tube to a second position relative to the mold [column 3 lines 27-32]; and releasing the mold from the tube [figures 5-6], where in the step of moving occurs after the step of releasing [column 3 lines 27-3].

Valleins only discloses axially transferring the tube, but does not disclose rotating the tube as well.

However, Steingroever also discloses forming a tubular body for heat exchanger where the tube is intermittently moved both axially and rotatably approximately 5-9 degrees [axial movement 9 and rotating movement 11, fig. 1].

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide Valleins with a rotating move to the tube in addition to axial move between forming as disclosed by Steingroever in order to provide structural

integrity to Valleins metal frame by having ribs or flutings radially around the metal tube instead of just two sides and thus the tubular frame being able to withstand transverse compression from any circumferential face.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **MOHAMMAD YUSUF** whose telephone number is (571) 270-7487. The examiner can normally be reached on Monday-Friday 8:00AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dana Ross can be reached on (571) 272-4480. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Dana Ross/
Supervisory Patent Examiner, Art Unit 3725

/MOHAMMAD YUSUF/
Examiner, Art Unit 3725